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(54) Title: **A CLINICAL DOCUMENTATION SYSTEM FOR USE BY MULTIPLE CAREGIVERS**

(57) Abstract: A computer-based system for recording, storing, and accessing clinical documentation in an acute care setting is provided. In an embodiment of the invention, a single electronic database or repository for storing clinical patient notes, provides multiple points of read/write access via a user interface operating on one or more client computers that are in real-time communication with the repository.

A CLINICAL DOCUMENTATION SYSTEM FOR USE BY MULTIPLE CAREGIVERS**Cross-Reference to Related Applications**

5 This application claims priority to United States Provisional Application Serial No. 60/233,950, filed September 20, 2000, the disclosure of which is hereby expressly incorporated herein by reference.

Field of the Invention

10 The invention relates generally to information management systems for use within the healthcare enterprise, and more particularly, to a system for documenting clinical patient information generated by multiple caregivers.

Background of the Invention

15 During the course of a patient's stay in an inpatient or acute care facility, the patient will be seen by a variety of health care providers as they review the patient's status, recommend treatments and protocols, provide care, order tests, etc. Providers must record all of their activities and decisions for the patient, and efficient communication of this information between all of a patient's caregivers is key to the problem of providing a patient with the best possible care.

20 Existing approaches to this problem typically center on some kind of shared patient record. A shared paper chart kept in or near the patient's room represents perhaps the most common but also the least effective approach. A shared paper chart offers very limited security and virtually no simultaneous access for either viewing or editing the patient's hospital record. What's more, as information is eventually added to the patient's record from a large number of caregivers, it becomes increasingly difficult and time consuming to identify and review appropriate information for a particular situation.

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A computer-based approach can solve some of these problems by providing a central repository for storing and accessing clinical documentation for a patient, and in recent years many computer-based clinical documentation systems have been conceived and implemented for both ambulatory and acute care settings. However, these systems typically demonstrate

5 weaknesses and problems that result in a failure to ensure efficient communication between a patient's acute caregivers. Problems with these systems include a failure to address one or more of the following needs:

- providing a single point of access to the information recorded by all of the patient's caregivers during an acute care episode;
- 10 providing simultaneous access to a patient's chart for both viewing and editing from different locations while maintaining data integrity;
- providing role-based security to limit each caregiver's viewing and editing access to a patient's chart;
- providing user-linked time-stamps for both data entry and review that a) make it easy to
- 15 present a longitudinal view of the patient record, b) provide a means for a user to quickly see information that's been added to the patient's record since the user's last review, and c) providing for note cosign by one or more caregivers;
- providing for storing and sorting patient notes according to caregiver's roles, service areas and etc.;
- 20 providing easy to use filter and search tools that allow a caregiver to quickly identify and review clinically appropriate information for a given situation;
- providing for entering data other than entirely manual keyboard entry, for example automated text-entry options, dictation, voice recognition, etc.;

providing for incorporating available information relevant to a patient's acute care episode, for example emergency room (ER) notes, hospital discharge summaries etc.

Thus, there is a need for a clinical documentation system that addresses these needs within the healthcare enterprise.

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Brief Description of the Drawings

FIG. 1 is a block diagram illustrating a patient health record system in accordance with an embodiment of the invention.

FIG. 2 is a block diagram illustrating a graphic user interface of the patient health record system illustrated in FIG. 1.

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FIG. 3 is a graphic representation of the graphic user interface illustrated in FIG. 2.

FIG. 4 is a graphic representation of a new/edit window function in accordance with an embodiment of the invention.

FIG. 5 is a graphic representation of a cosign function in accordance with an embodiment of the invention.

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FIG. 6 is a graphic representation of a filter function in accordance with a preferred embodiment of the invention.

FIG. 7 is a flowchart representing the general workflow associated with a system in accordance with an embodiment of the invention.

FIG. 8 is a flowchart representing a workflow for adding, editing or deleting a patient note in accordance with an embodiment of the invention.

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FIG. 9 is a flowchart representing a workflow for adding a patient note in accordance with an embodiment of the invention.

FIG. 10 is a flowchart representing a workflow for filtering patient notes in accordance with an embodiment of the invention.

FIG. 11 is a flowchart representing a workflow for retrieving and displaying a last entered patient note in accordance with an embodiment of the invention.

5 FIG. 12 is a flowchart representing a workflow for searching patient notes in accordance with an embodiment of the invention.

FIG. 13 is a flowchart representing a workflow for annotating a patient note in accordance with an embodiment of the invention.

10 FIG. 14 is a flowchart representing a workflow for sorting patient notes in accordance with an embodiment of the invention.

FIG. 15 is a flowchart representing a workflow for cosigning a patient note in accordance with an embodiment of the invention.

FIG. 16 is a flowchart representing a workflow for printing and/or copying a patient note in accordance with an embodiment of the invention.

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Detailed Description of the Preferred Embodiments

A computer-based system for recording, storing, and accessing clinical documentation in an acute care setting is provided. In an embodiment of the invention, a single electronic database or repository for storing clinical patient notes is accessed via a plurality of client workstations
20 coupled, e.g., networked, to the single electronic database providing multiple points of read/write access via a user interface operating on one or more client computers that are in real-time communication with the repository.

The system may provide for storing and sorting patient notes according to caregiver's roles, service areas, etc., and may include a data access scheme that provides simultaneous view

access to a patient's chart for both viewing and editing, and which automatically locks an individual note from write access when it is being edited by someone else. In addition, an embodiment of the invention may include a role-based user-security scheme that can be configured to limit each caregiver's viewing and editing access to a patient's chart to only appropriate types of information. An embodiment of the invention may also include a user-linked time-stamping mechanism for both data review and entry and a corresponding user interface that a) presents a longitudinal view of the patient record and b) permits a user to easily filter for information that's been added to the patient's record since the user's last review. Longitudinal view refers to an ability to display and view notes from a patient's previous contacts over time providing essentially a holistic view of the patient's contact history.

An additional embodiment of the invention may provide for importing (either manually or automatically) available information relevant to a patient's acute care episode from external sources where necessary, for example ER notes, hospital discharge summaries, etc., and for viewing, filtering, and searching this information along with the other patient notes. Still further, an embodiment of the invention may provide for importing, storing and viewing graphic and other multi-media information and linking it to the appropriate entries in a patient's acute care record.

A system according to the embodiments of the invention may include a user interface coupled to the enterprise health record system to provide single point of access for information recorded by all of a patient's caregivers during an acute care episode. The user interface may include pre-defined role-based filters and/or an easy to use custom filter and search options that allow a caregiver to quickly identify and review clinically appropriate information for a given situation. The user interface allows caregivers to choose between a number of data entry

options, including manual keyboard entry, automated text-entry, dictation, voice recognition, etc.

The user interface may also allow caregivers to file a note (to store it on the server) and mark it either as complete or pending, and may further allow a caregiver to edit a note while also reviewing other information in the patient's acute care record. In accordance with the


5 embodiments of the invention, the user interface makes it easy for users to take appropriate follow up actions for specific entries in a patient's acute care record, for example, for a supervising physician to review, document, and cosign an entry made by a resident.

Referring to FIG. 1, an enterprise patient health record system 10 includes a number of data elements 12 for supporting the information needs of the healthcare enterprise. As shown in
10 FIG. 1, the system 10 includes a patient ID element 14, a patient encounter element 16, a clinical notes element 18, a user security element 20 and a providers element 22. These elements, for example, provide to the system 10 respective data services. For example, the patient ID 14 includes a data structure for organizing and storing patient identification information and may incorporate processing and communication capability to allow the element to interface with the
15 other elements of system 10 for receiving, organizing and storing patient information and for retrieving and delivering patient information. Of course the processing and communication capability may be centralized within the system 10, in which case the respective element would include just the appropriate data structure for organizing and retaining data. The system 10 drives a graphic user interface (GUI) 24 shown in FIG. 2. The GUI 24 may be supported on any
20 number of client workstations coupled, e.g., networked, to the system 10. As such, a user may log into the system 10 at any of the workstations from virtually any location, including remotely from the healthcare facility via a private network or a public network, e.g., the Internet.

The GUI 24 may have a web browser or other suitable appearance, and includes an activity header 26, an activity toolbar 28, a notes toolbar 30, a notes listing window 32 and a notes viewing window 34. The activity header 26 may provide current patient information, such as patient name, sex, age, insurance and other patient demographic information. The activity
5 toolbar 28 contains point-and-click activity selections, which allow the user to activate various activities within the system 10, including the patient's notes activity.

Referring generally to FIG. 3, the notes listing window 32 provides the user with a listing of all or selectively filtered notes for the current patient. Selecting a note from the listing window 32 causes the note to be displayed in the notes viewing window 34. Notes within the
10 listing window 32 may be color coded and/or may include a graphic representation, e.g., an icon, to depict the author, author type, medical service, etc., associated with the note. The author, author type, medical service, note time and date, etc., may be depicted with the body of the note in the viewing window 34. Additionally, scrolling may be provided to facilitate viewing of the notes within the viewing window 34.

15 With more particular reference to FIG. 3, the notes listing window 32 may include a plurality of note tabs 36 indicating various categories of notes. The user may click on one of the tabs to display a list of notes for that category. Only the notes written by authors that match a current filter criteria, described more fully below, are displayed. The notes listing window also includes an author symbol column 38. Within the author symbol column 38, a graphic
20 representation, i.e., an icon or symbol, may be displayed indicating the author type. The notes listing window also includes an author segment 40 to display the name of the provider who wrote the note, the service segment 42 to display the name of the medical service to which that user belongs and an author type segment 44 indicating the role of the provider writing the note. The



specific authors types listed may be configured by a system administrator and/or by the user. A cosign segment 46 displays the word "required" for notes requiring a cosign. When a cosign is required, a cosign button (not depicted) appears adjacent the note in the listing window 32. The cosign button opens a cosign window (FIG. 5) to allow the cosigning user(s) to enter the required cosign(s). A filed segment 48 displays the date and time the note was accepted., and a category segment 50 indicates the category of the note when all notes are being displayed. In addition, a copy button 54 appears adjacent each note in the viewing window 34. The copy button 54 causes a copy of the text of the note to be copied to a clipboard, e.g., the Windows clipboard, allowing the text to be pasted into a new note and/or into a different application.

Within the notes toolbar 30 there are a number of buttons 52 corresponding to functions related to the patient's notes activity allowing the user to select a particular function using a point-and-click or similar action. New note and edit note functions each opens a new/edit note window 56 shown in FIG. 4 and allows the user to enter the new note or edit the pending note. The edit notes function may only be used with the user's own notes, and the user is not permitted to edit another user's notes. Moreover, once a note is accepted, it generally may not be edited or deleted. The window 56 includes a number of fields including a cosign required box 58, which allows the user to indicate whether a cosign for the note will be required. A note type selection 60 is provided to allow the user to enter the category of the note, such as: progress notes, consult notes, procedures, History and Physical notes, Discharge summaries and Emergency Department notes.

Another note type that may be provided is referred to as a "tagged" note. A tagged note may generally be any note type supported by the system 10, but the tagged note includes tag data. The tag data sub-classifies or sub-types the note. One feature of the tag data is that it

allows the notes to be efficiently segregated and collected for report generation. For example, certain notes may relate only to casual or general comments that would not ordinarily be reported. These notes might be tagged "casual comments." Other notes may relate to the patient's treatment plan that would be reported. These notes might be tagged "treatment plan."

- 5 A filter search by author would retrieve both the casual comments and the treatment plan notes, while a search by author and the "treatment plan" tag would provide only those notes by that author that are also tagged "treatment plan."

- The user enters the note text in a note text box 62. Note text may be entered using many common wordprocessing functions including typing, copying, cutting and pasting, by using
10 drafting assist tools, such as the SmartSet documentation tool available from Epic Systems Corporation of Madison, Wisconsin, or by dictation, which may include voice recognition. The user selects the entry method using the appropriate one of the buttons 59. Using dictation alone causes the note to be recorded for later transcription to text, while using dictation in conjunction with voice recognition may provide an instantaneous text transcription. A note editing toolbar
15 64 provides text editing and formatting functions to assist the user in entering the note text.

- When a cosign is required, the cosigning user opens a cosign note window 66 shown in FIG. 5 using the cosign button 52 (FIG. 3). The type of cosign required is specified by cosign data specified for the note by the author. The required cosign may specify a single caregiver, for example, the author's attending physician. Alternatively, the required cosign may specify
20 cosigns from multiple caregivers from one or more medical services. The cosign window 66 allows the cosigning user(s) to indicate that the user's note has been reviewed and approved by the cosigner. The user's note is displayed in a note text window 68, and the cosigning user(s) enters their approval/disapproval and any appropriate comments in a cosign text box 70. Once

the cosigning user(s) accepts the cosign note, the original note and the cosign note are linked so other users may easily see relevant information from both.

A delete note function allows the user to delete the pending note. The user may not delete another user's notes nor may the user delete a note once it has been accepted; however, it may be possible to soft delete a note. There may be an occasion that a note should be deleted, for example, if the note is out of date or in error. In some instances, governmental regulations may prohibit deleting of information from the patient's record. Soft deleting allows the user to indicate the deleted status of the note while not permanently removing the note from the system.

A filter function allows the user to modify the types of notes that appear in the notes listing window and opens a filter options window 72 shown in FIG. 6. There are many possible filter criteria that may be implemented. For example, notes may be filtered by time, author type, author, medical service, etc. For example, selecting to filter by author type causes a listing of the various author types 74 to appear in the filter options window 72. The user selects a particular author type, such as physician, registered nurse, etc., and after the user accepts the criteria, the notes for that author type are displayed in the listing window 32.

A "my last note" function causes the user's most recent note in the category to be highlighted. A search function opens a find window (not depicted), in which the user may enter specific words or phrases as criteria to search within the existing notes. The search may be limited to a category of notes, or may encompass multiple categories or all notes.

A legend/notes function toggles the notes listing window 32 between a notes state and legend state. In the notes state, displayed within the listing window 32 is a listing of the filtered notes for the current patient in reverse chronology order. In the legend state, displayed within the listing window 32 is a key explaining the symbols and colors associated with the notes. As

described above, to distinguish notes, by type, author or otherwise, the notes may be displayed in corresponding colors and/or may include a graphic representation, e.g., an icon, adjacent the note to designate, for example, its author type, and the legend state permits viewing of this representative information.

5 A refresh function updates the information displayed in the notes listing window 32. If other users have written notes for the current patient since the last refresh, these new notes will now appear in the listing window 32. If a filter option has been selected, the listing is refreshed using the current filter criteria. In addition, the information displayed in the notes listing window 32 may periodically be updated at a rate specified by a system administrator and/or by the user.

10 A print function causes the selected note to be printed. As an option, the user may select to print all of the notes by selecting an all notes function associated with the print button.

Referring now to FIGs. 7-15, and initially to FIG. 7, workflows associated with the operation of the system 10 are described in greater detail. Workflow 700 begins with a logged in user opening an available patient record, 701. The system 10 checks the user's security record
15 for authorized activities, and displays the authorized activities in the activity bar 28, 703. If the user is not authorized to view patient notes, 705, then the notes option is not made available to the user via the activity bar 28, 707. Otherwise, the user selects the patient's notes activity from the activity bar 28, 709, and the system checks the user's security to determine the notes the user may access, 711, and these notes are displayed in the listing window 32, 713. The user may then
20 add, edit, filter, search, cosign, etc. notes by selecting such functions from the appropriate one of the notes toolbar, 715, the notes listing window, 717 or the notes display window, 719. Links, 721-741, take the user to a workflow corresponding to the selected activity.

From link 721 for the new/edit/delete functions, the workflow 700 proceeds to the workflow 800 illustrated in FIG. 8. If the user wants to delete a note, 801, the user selects the note to be deleted and clicks a Delete button, 803. The system 10 updates the notes listing, removing the deleted note from all tabs on which it was displayed, 805. If the user wants to edit a note, 807, the users selects an Edit Note button opening the new/edit note window 56, 811. Similarly, if the user wants to create a note, 809, the user selects a New Note button opening the new/edit note window 56, 811. The user has several options for creating/editing a patient note, as described above. Once the note is created/edited, the user clicks a Pend button to close the new/edit note window 56 and save the note under a pending notes tab. Notes that have not been accepted may be saved under the pending notes tab of the new/edit notes window 56. Other users may not view pending notes and the user may edit or delete the note until it has been accepted. If the user wants to accept the note, the user clicks an Accept button to close the new/edit notes window 56 and save the note. Once the note is accepted, it cannot be edited and may only be soft deleted. There is also a Cancel button allowing the user to cancel out of the new/edit notes window without saving changes.

From the link 723 for the note addendum function, the workflow 700 proceeds to the workflow 900 illustrated in FIG. 9. If the user wants to create an addendum to a note, the user selects the note and selects the addendum function opening the new/edit note window 56, 901. Because a note cannot be edited and only may be soft deleted once accepted, adding an addendum provides for adding or updating note information. Editing of the addendum is the same as that for editing or creating a note, except that the original text of the note may not be edited, 903. When completed, the user accepts the addendum, and the new addended version of

the note appears in the notes listing window 32 with a date and time stamp link to the original note, 905.

From the link 725 for the note filter function or the link 737 for the note filter tab, the workflow 700 proceeds to the workflow 1000 illustrated in FIG. 10. If the user selects the filter tab, 1001, from the notes listing window 32, the system 10 updates the notes listing to include only those notes associated with the category indicated on the selected tab in reverse chronological order, 1003. If the user selects the filter button, 1001, the filter window 72 is opened, 1005, allowing the user to set filter criteria, 1007. Filter criteria includes, but is not limited to, filter by time, filter by author type, all notes, unselect all, reload filter preferences, save filter preferences, accept or cancel. Filter by time options include filtering by time periods such as the previous 24 or 48 hours, since last note entry or all notes. The select all allows the user to select all author types, and the unselect all allows the user to unselect all author types. The user may create preferred filter configurations, and these preferences may be saved in connection with the user profile. This permits the user to easily filter and view the notes most commonly associated with their work activity. Accepting the filter selections returns the user to the notes window 29.

From the link 727 for the "my last note" function, the workflow 700 proceeds to the workflow 1100 illustrated in FIG. 11. If the user selects the "my last note" button, 1101, the system 10 automatically highlights the most recent note authored by the user, 1103. The notes listing is scrolled as necessary to permit display of the user's last note.

From the link 729 for the search function, the workflow 700 proceeds to the workflow 1200 illustrated in FIG. 12. If the user selects the search button, 1201, a find window (not depicted) is opened, 1203. Within the find window, the user may set search criteria, 1205. The

search criteria may include text that is to be whole or partial word searched within the text of the notes, including matching case. The search direction can be set between chronological in ascending or descending order. Once a note meeting the criteria is found, it is highlighted in the notes listing window 32. Using a next button, the user may move to the next note meeting the
5 search criteria. To exit the search function, the user presses a cancel button.

From the link 731 for the legend/notes function, the workflow 700 proceeds to the workflow 1300 illustrated in FIG. 13. If the user selects the refresh button, 1301, the system 10 refreshes the listing of notes in the notes listing window 32, 1303. If the user selects the time mark button, 1305, all notes displayed for the patient are marked as viewed by the user as of that
10 current date and time. This time mark data is stored within the system 10, and is available for use in conjunction with decision support tools (e.g., has an urgent note regarding the patient been reviewed within the last 24 hour period). If the user selects the legend button, 1309, the notes listing in the notes listing window 32 is replaced with a legend showing the symbols associated with each author type, 1311. When the user selects the notes button, 1313, the notes listing
15 window 32 toggles back to the notes listing, 1315.

From the link 735 for the notes listing column function, the workflow 700 proceeds to the workflow 1400 illustrated in FIG. 14. Upon selecting the notes listing column function, the notes listing in the notes listing window 32 is re-sorted in ascending or descending order on the basis of the information listed in the selected column, 1401. Sorting is in alphabetical or
20 numerical order depending on the type of information in the column. The user can click the column again to reverse the sort order from ascending to descending, or vice versa.

From the link 739 for the cosign function, the workflow 700 proceeds to the workflow 1500 illustrated in FIG. 15. Upon selecting the cosign required button for a note in the notes

viewing pane, 1501, the cosign note window 66 is opened. Fields within the cosign note window 66 includes note type box indicating the type of note being cosigned, a note text box displaying the note text along with additional information including the author and the data and time the note was filed, and cosign text box allowing the cosigning user to enter text in connection with
5 cosigning the note, 1503.

From the link 733 for the print function and the link 741 for the copy function, the workflow proceeds to the workflow 1600 illustrated in FIG. 16. Upon selecting the copy button for a note from the notes viewing window 34, 1601, the text of the note is copied onto a clipboard, such as the Windows clipboard, 1603. From the clipboard the text may be copied to
10 other notes or may be copied to other applications. Upon selecting the print button for a note from the notes viewing window 34, 1605, the text of the selected note is printed through an appropriately configured printer along with any other information listed with the note in the note viewing window 34, 1607. Types of other information include author and author type.

The invention has been described in terms of several embodiments, including a number
15 of features and functions. Not all features and functions are required for every embodiment of the invention, and in this manner the invention provides a flexible system by which a user may document and use clinical patient information. The features discussed herein are intended to be illustrative of those features that may be implemented; however, such features should not be considered exhaustive of all possible features that may be implemented in a system configured in
20 accordance with the embodiments of the invention.

CLAIMS

We claim:

- 5 1. A system for documenting patient information from multiple caregivers comprising:
a health record system including a plurality of data elements, the data elements including
patient note data acquired from multiple caregivers, provider data and user information; and
an interface coupled to the health record system including a graphic display, the interface
operable to retrieve, based upon the user information, patient note data associated with a
10 specified patient, and to graphically depict the patient note data in list form and text form within
the graphic display.
2. The system of claim 1, wherein the interface further comprises an editor operable with
the interface to facilitate editing of the patient note data within the graphic display.
- 15 3. The system of claim 2, wherein the editor is operable with the interface to facilitate
creation of note data.
4. The system of claim 2, wherein the editor is operable independent of the depiction of the
20 patient note data within the graphic display.
5. The system of claim 1, wherein the plurality of caregivers are associated with a plurality
of medical services.

6. The system of claim 1, wherein the plurality of caregivers are associated with a plurality of related medical services.
7. The system of claim 1, wherein the interface further comprises a filter for selecting particular patient note data for depiction within the graphic display.
8. The system of claim 7, further comprising filter criteria associated with the filter, the filter criteria comprising at least one of: author, author type and time.
9. The system of claim 1, wherein the patient note data is linked by time stamp data.
10. The system of claim 9, wherein the patient note data is graphically depicted within the graphic display according to the time stamp data.
11. The system of claim 1, further comprising a second interface including a graphic display coupled to the health record system, the second interface operable to retrieve, based upon the user information, patient note data associated with the specified patient, and to graphically depict the patient note data in list form and text form within the second graphic display.
12. The system of claim 1, wherein the interface further comprises a searcher operable with the interface to facilitate searching of the patient note data for depiction within the graphic display.

13. The system of claim 12, wherein the patient note data includes tag data, and wherein the searcher is operable on the tag data.

14. The system of claim 1, wherein the patient note data includes cosign data.

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15. The system of claim 14, wherein the cosign data comprises a cosign from at least one caregiver.

16. The system of claim 14, wherein the cosign data comprises cosign requirement data, the
10 cosign requirement data specifying a number of required cosigns.

17. The system of claim 1, wherein the patient note data comprises soft delete data.

18. A method of documenting patient note data within a health record system, the health record system including data structures for storing the patient note data, provider data and user data, the method comprising the steps of:
- collecting patient note data from a plurality of caregivers and storing the patient note data in at least one of the data structures;
- providing an interface coupled to the health record system, the interface including a graphic display, and
- for a patient, listing the patient note data in a first portion of the graphic display and text linked with the patient note data in a second portion of the graphic display.
19. The method of claim 18, further comprising filtering the patient note data to provide filtered patient note data and listing the filtered patient note data in the first portion of the graphic display and text linked with the filtered note data in the second portion
20. The method of claim 18, further comprising editing the patient note data.
21. The method of claim 18, wherein the step of collecting patient note data from a plurality of caregivers comprises collecting patient note data from a plurality of unrelated caregivers.
22. The method of claim 18, wherein the step of collecting patient note data from a plurality of caregivers comprises collecting patient note data from a plurality of related caregivers.

23. The method of claim 18, further comprising the steps of:
- providing a second interface coupled to the health record system, the second interface including a second graphic display, and
- for the patient, listing the patient note data in a first portion of the graphic display and
- 5 text linked with the patient note data in a second portion of the graphic display.
24. The method of claim 23, comprising editing a portion of the patient note data via the interface and concomitantly inhibiting editing of the portion via the second interface.
- 10 25. The method of claim 18, wherein the patient note data comprises time stamp data, and wherein the step of listing the patient note data comprises listing the patient note data according to the time stamp data.
26. The system of claim 18, wherein the patient note data includes tag data, and wherein the
- 15 method further comprises the step of assembling a report of the patient note data based upon the tag data.
27. The system of claim 18, wherein the patient note data includes cosign data, and wherein the method further comprises the step of cosigning the patient note data in accordance with the
- 20 cosign data.

28. The system of claim 18, wherein the patient note data comprises soft delete data, and wherein the method further comprises storing the patient note data in accordance with the soft delete data.

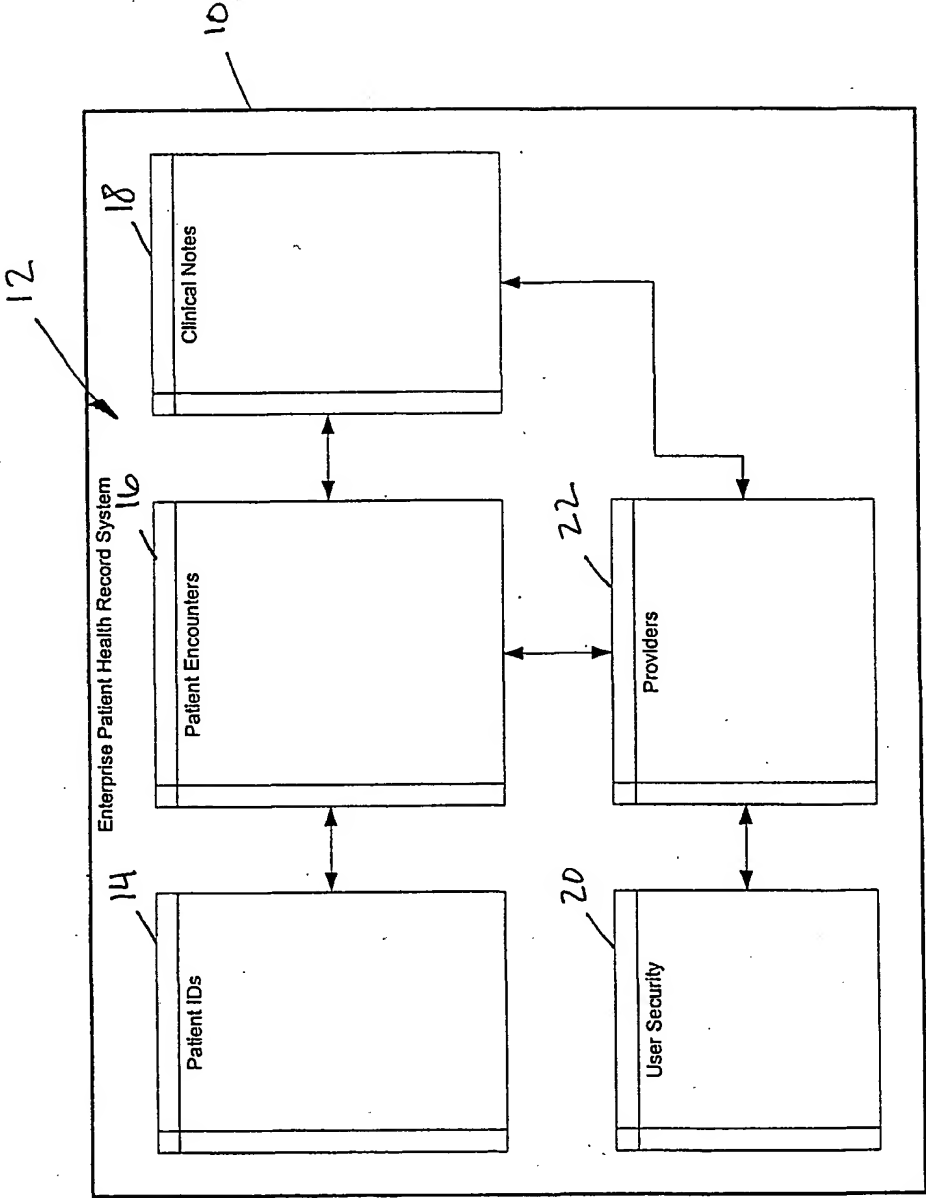


Figure 1

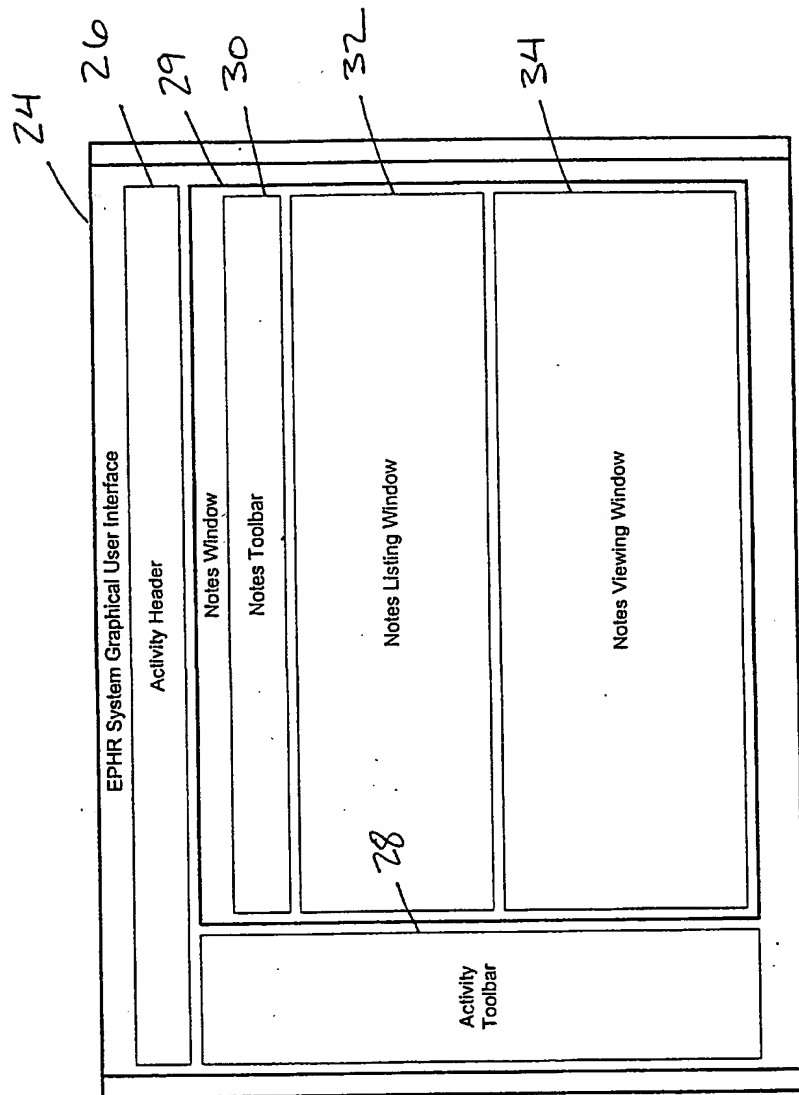


Figure 2

Desktop Home **Karlín, Arroyo** MRN Sex DOB AGE SSN PCP LOC INS
84960 M 3201934 66y 209-27-3210 SEEGER, MARTY E EPIC HEALTH WEST US HMO

Notes

Author	Service	Author Type	Created	Category
WINTER, KIM	Internal Medicine	Physician	04/09/2000 10:21 AM	Progress Notes
JUAREZ, MARK E	Medicine Resident	Physician	04/09/2000 3:17 AM	Progress Notes
HARKER, KIM	Nursing	Registered Nurse	04/09/2000 6:51 PM	Progress Notes
JUAREZ, MARK E	Medicine Resident	Physician	04/09/2000 5:12 PM	Progress Notes
WINTER, KIM	Internal Medicine	Physician	04/09/2000 12:41 PM	H&P
WRIGHT, DAVID	Emergency Medicine	Physician	04/09/2000 11:48 AM	ED Notes

HARKER, KIM
Nursing
04/09/2000 02:00 PM
Copy

Patient doing well. Notes improved function in the arm and thinks he has less facial droop. Vitals stable today BP 140/86, pulse 76, temp 97.8. Assisted with walking in hall. Transferred to physical therapy for assessment of gait and strength. Taking meds without problem. Had a brief headache. Gave Tylenol 325 mg, 2 tablets at 1200. Patient reported resolution of headache at 1500.

WINTER, KIM
Internal Medicine
04/09/2000 10:21 AM
Copy

Resident note reviewed
Agree with findings and assessment.
Plan includes increased mobilization, PT as needed, repeat CT scan in the AM, and transfer to the floor.
Expect D/C in a day or two.

Related note: JUAREZ, MARK E 04/09/2000 3:17 AM

JUAREZ, MARK E
Medicine Resident
04/09/2000 3:17 AM
Copy

FIG. 3

Athens, Jill - New Note by SEEGER, MARTY

Consent required

Note Type: Progress Notes

100% [Icons] [More] [Undo] [Redo] [Print] [Close]

S: feeling well this AM. Wants to go home. Continue to feel he is improving. Thinks he has more strength in arm and eating went okay yesterday. Slept okay.

O: BP 132/80, HR 76, RR 16
HEENT: pupils equal and reactive, gag intact
Neck: supple, carotids 2+, no bruits
Lungs: clear, decreased in bases
Heart: regular rhythm, normal rate
Abd: soft, nontender
Neuro: L facial droop mild at this point
Motor: RUE 5/5, RLE 5/5, LUE 4/5, RLE 5/5
Sensory: intact to light touch
Reflexes:
R - biceps 2+, Inceps 2+, patellar 2+, achilles 2+
L - biceps 2+, Inceps 2+, patellar 2+, achilles 2+

Labs

Copy/Prev Voice On Pend Accept Cancel

FIG. 4

Athens, Jill - Cosign Note by SEEGER, MARTY

Note Type: _____

JUAREZ, MARK E Medicine Resident 04-10-2000 8:42 AM

S feeling well this AM. Wants to go home. Continue to feel he is improving. Thinks he has more strength in arm and eating went okay yesterday. Slept okay.

O. BP 132/80, HR 76, RR 16
HEENT; pupils equal and reactive, gag intact
Neck: supple, carotids 2+, no bruits
Lungs: clear, decreased in bases
Heart: regular rhythm, normal rate
Abd: soft, nontender

100% [Icons] More - Arsl | 10 B I Q A =
[Icons]

Resident note reviewed.
Agree with findings and assessment
Plan includes increased mobilization, PT as needed, repeat CT scan in the AM, and transfer to the floor
Expect D/C in a day or two.

[Icons]
Copy Prev Voice On Accept Cancel

FILE. 5

Filter Options

Filter By Time
show all notes

Filter By Author Type

- ☒ Physician
- ☐ Nurse Anesthetist
- ☒ Registered Nurse
- ☒ Anesthesiologist
- ☒ Midwife
- ☐ Physician's Assistant
- ☐ Physical Therapy Assistant
- ☐ Occupational Therapy Assistant
- ☒ Nurse Practitioner
- ☐ Psychologist
- ☒ Therapist
- ☐ Radiologist
- ☐ MRI Technician

Select All Unselect All

Accept Cancel

FIG. 6

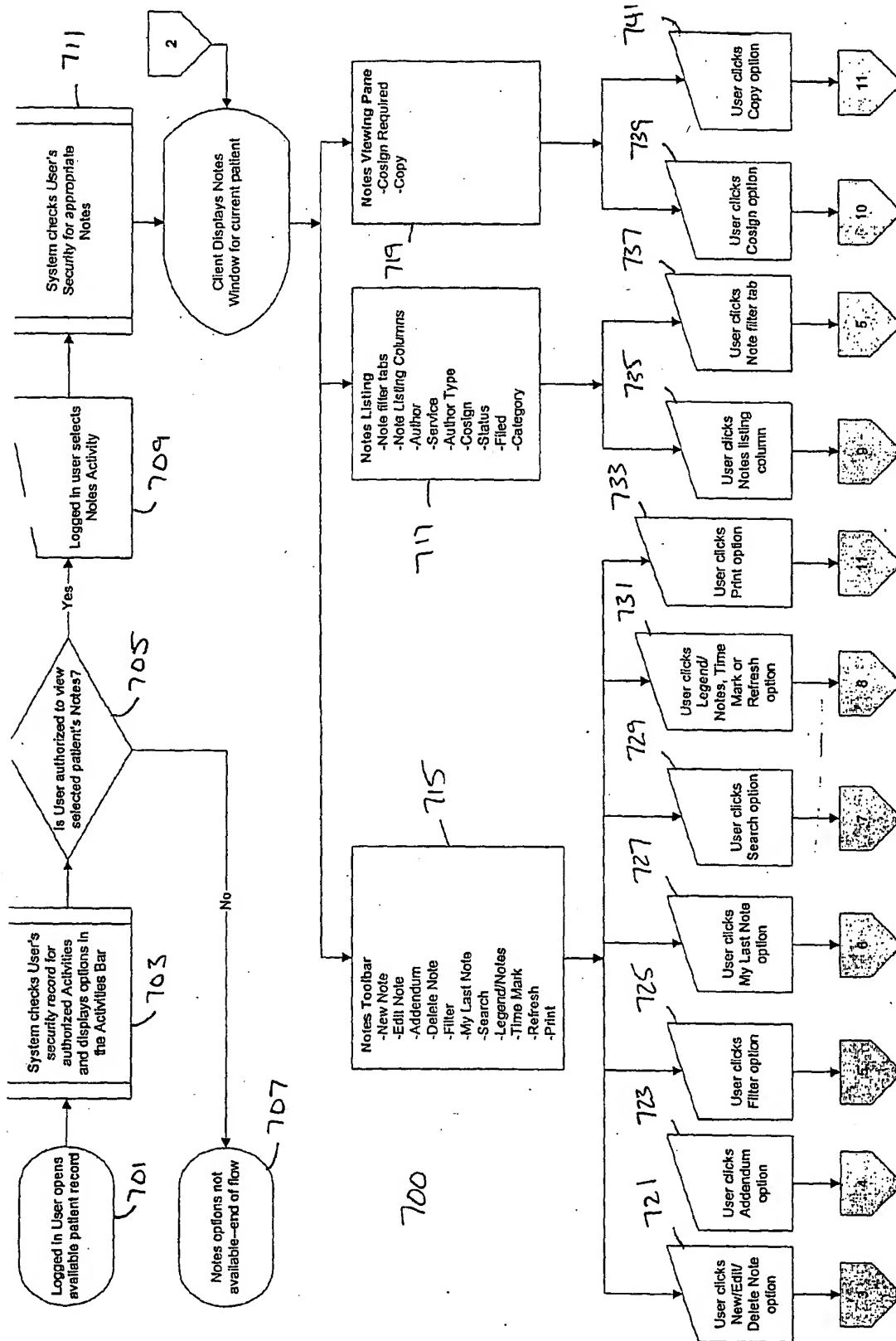


Figure 7

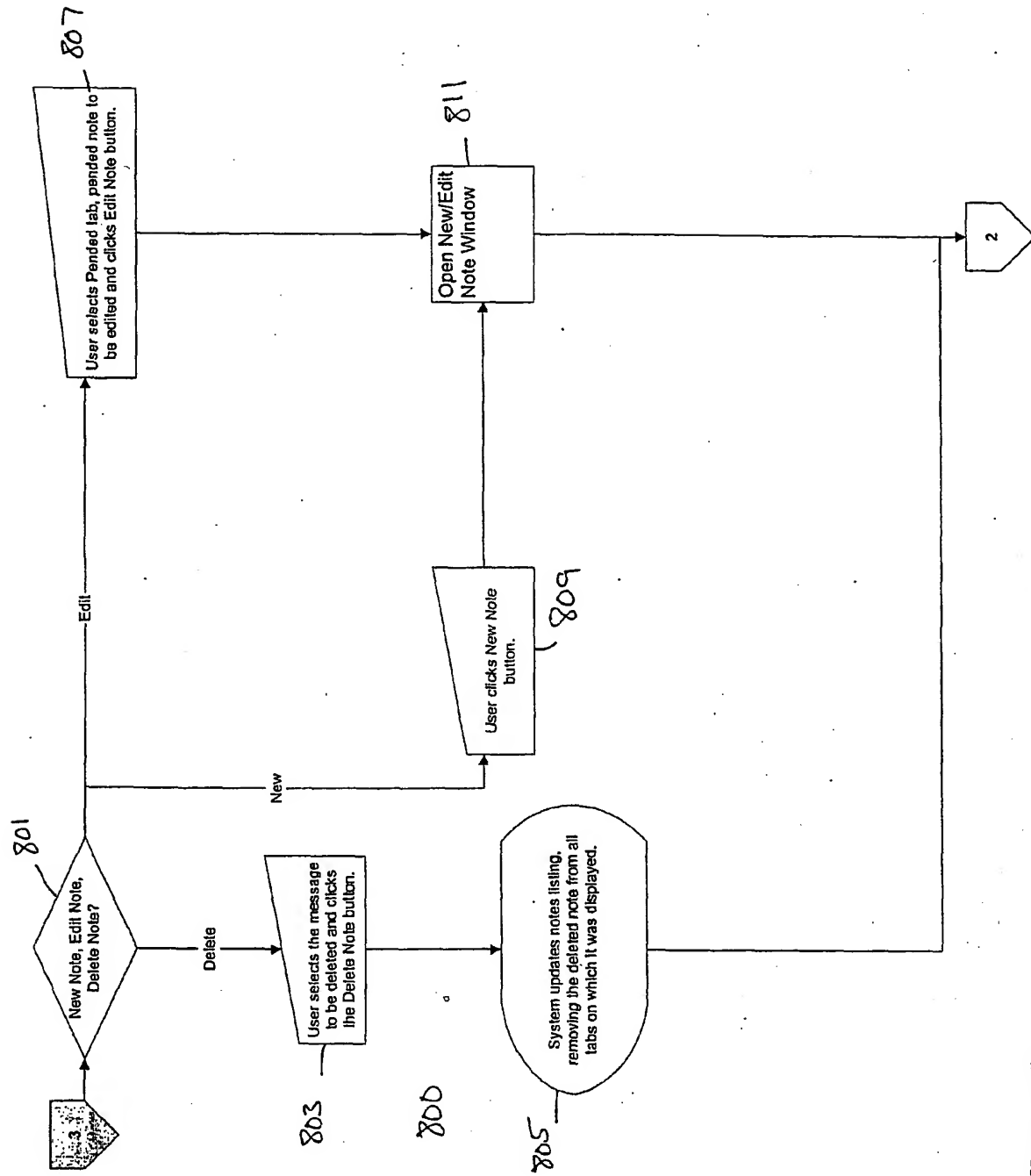


Figure 8

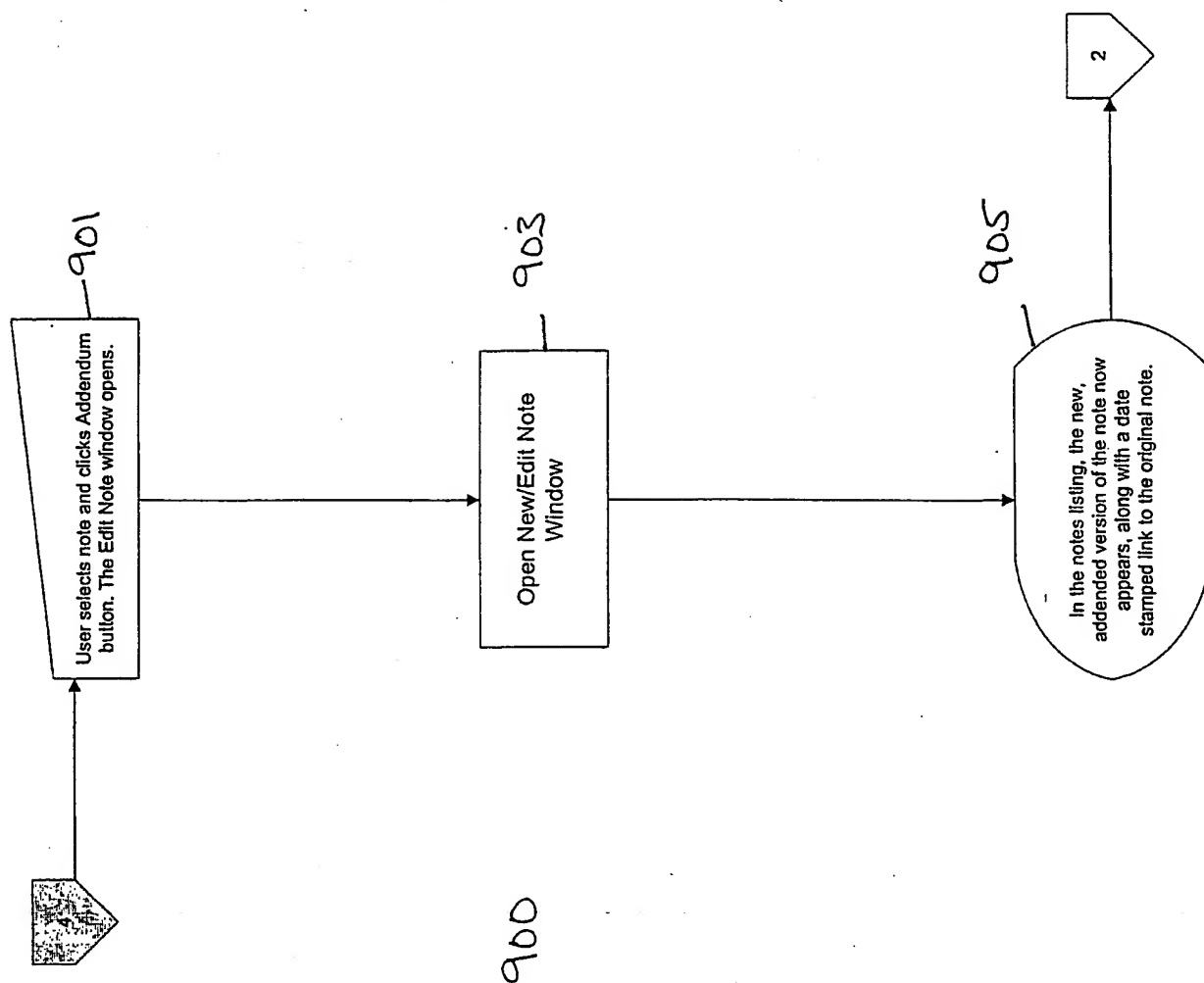


Figure 9

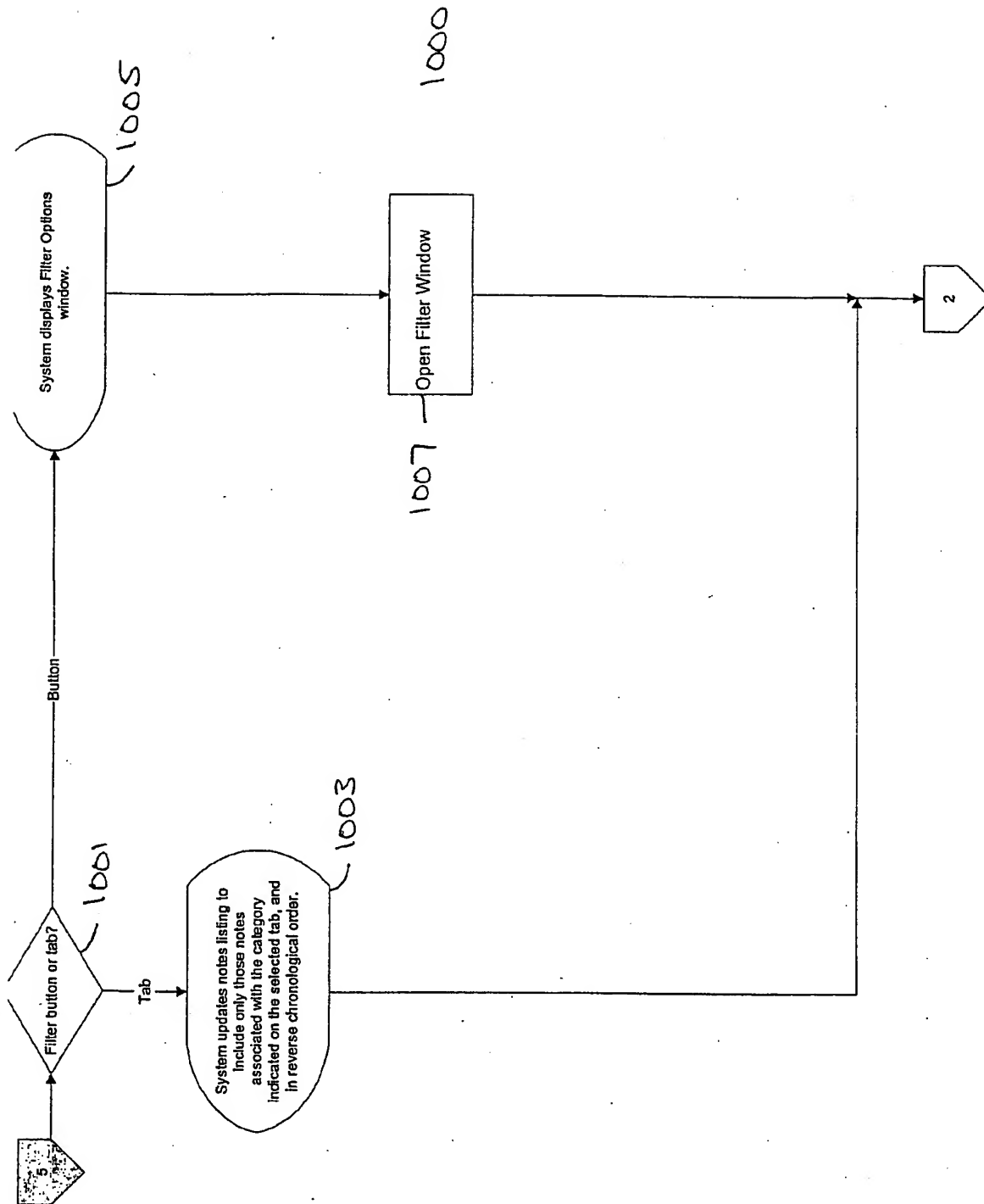


Figure 10

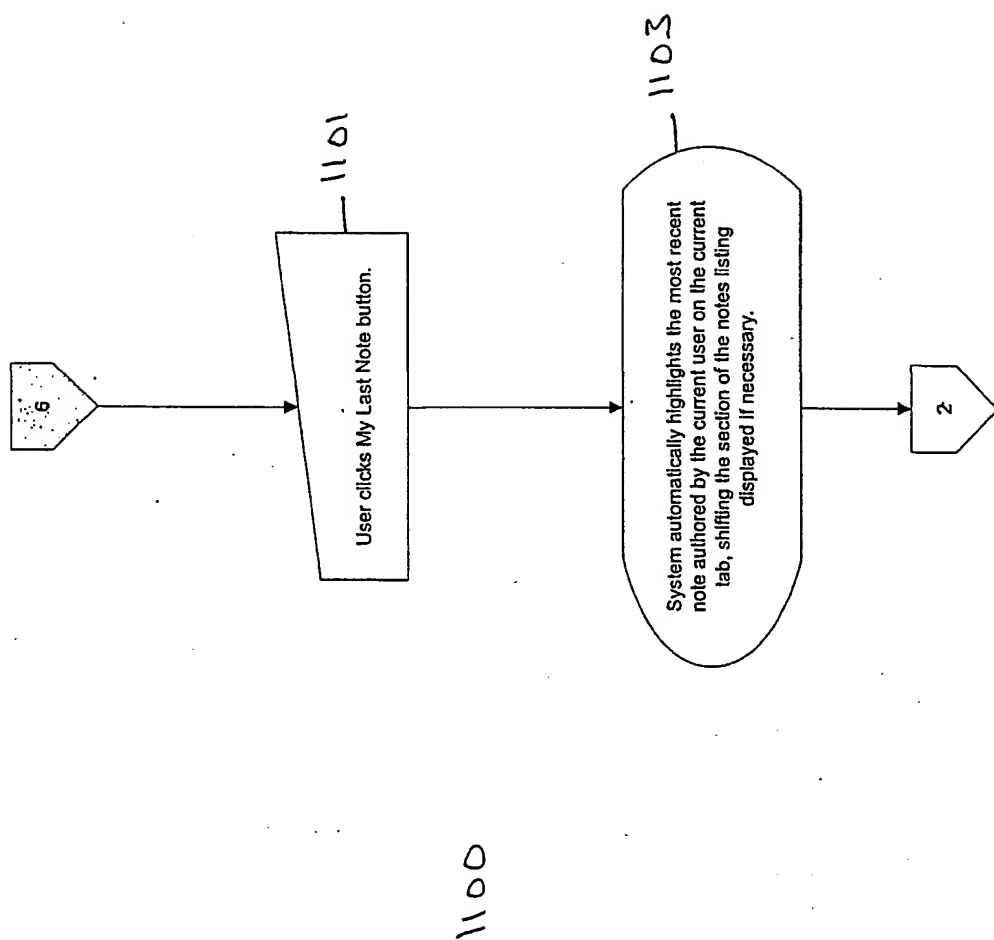


Figure 11

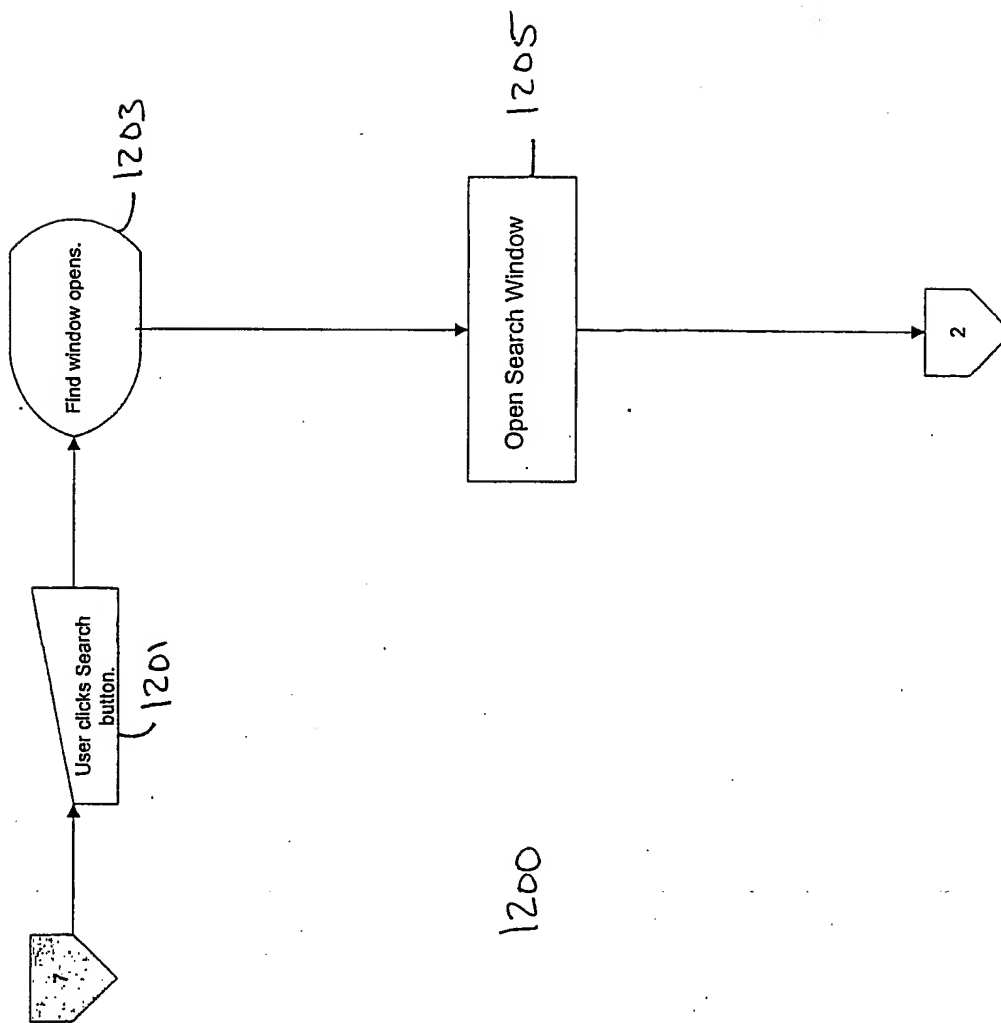


Figure 12

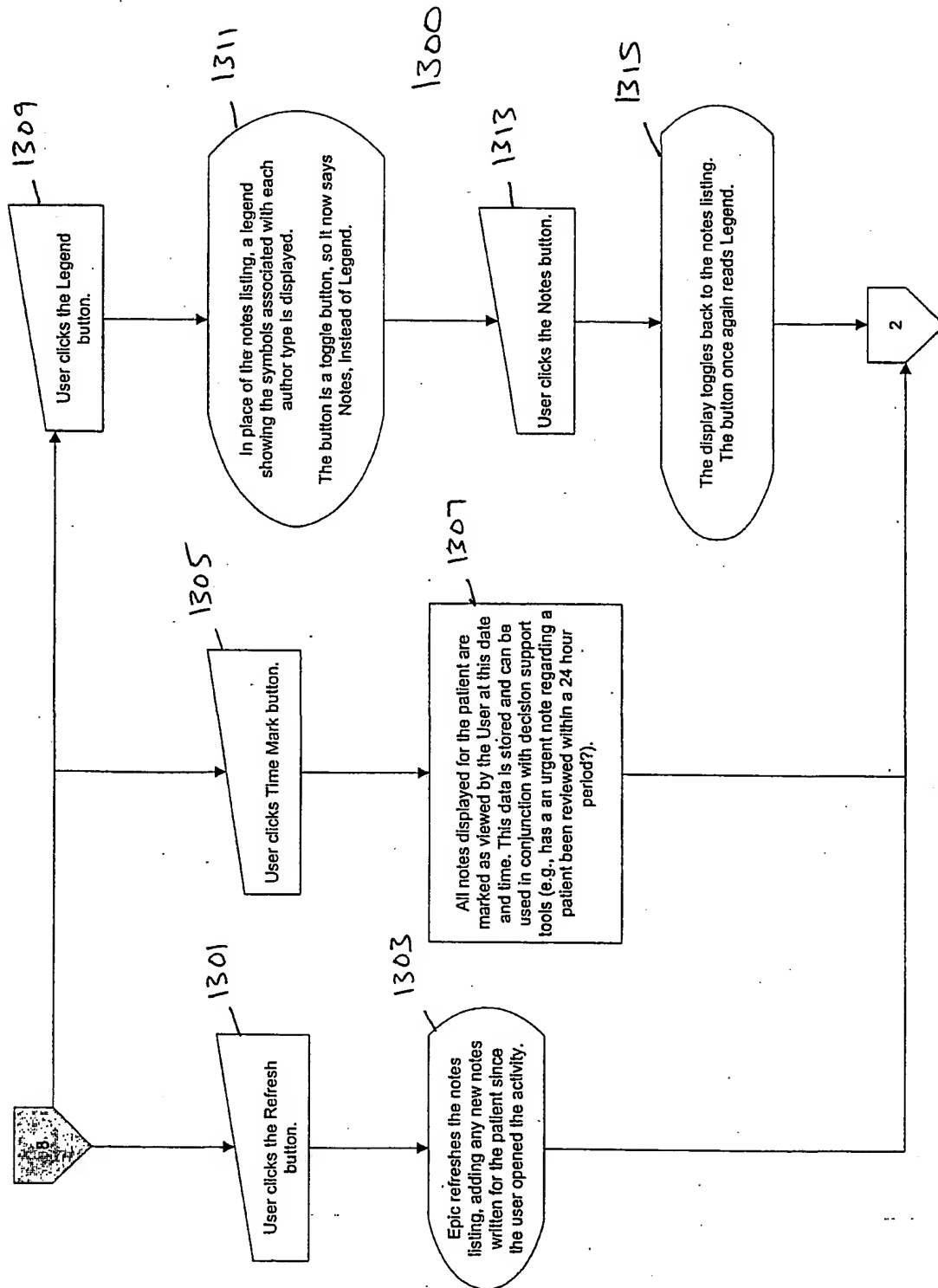


Figure 13

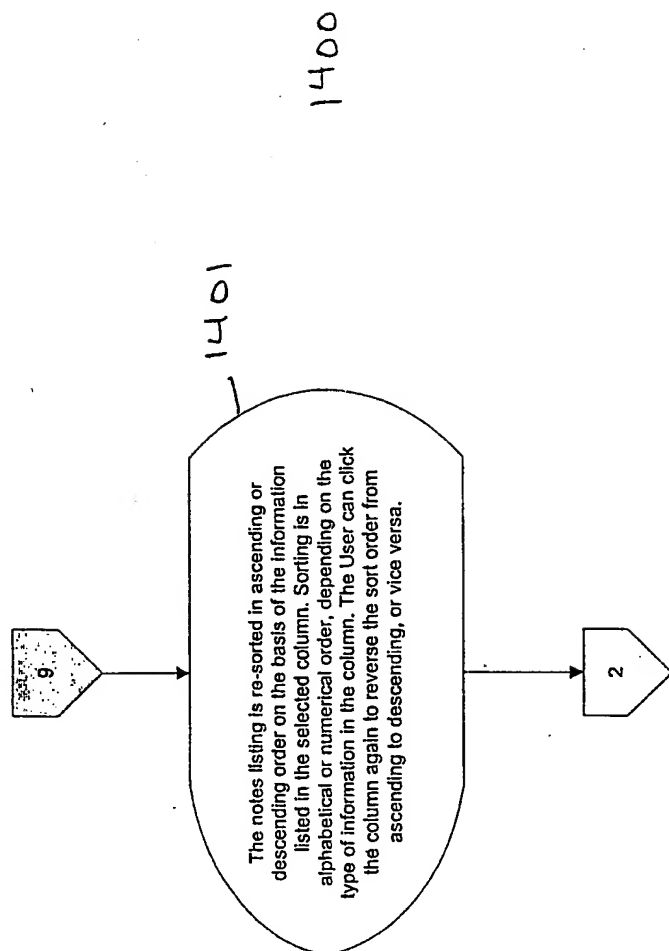
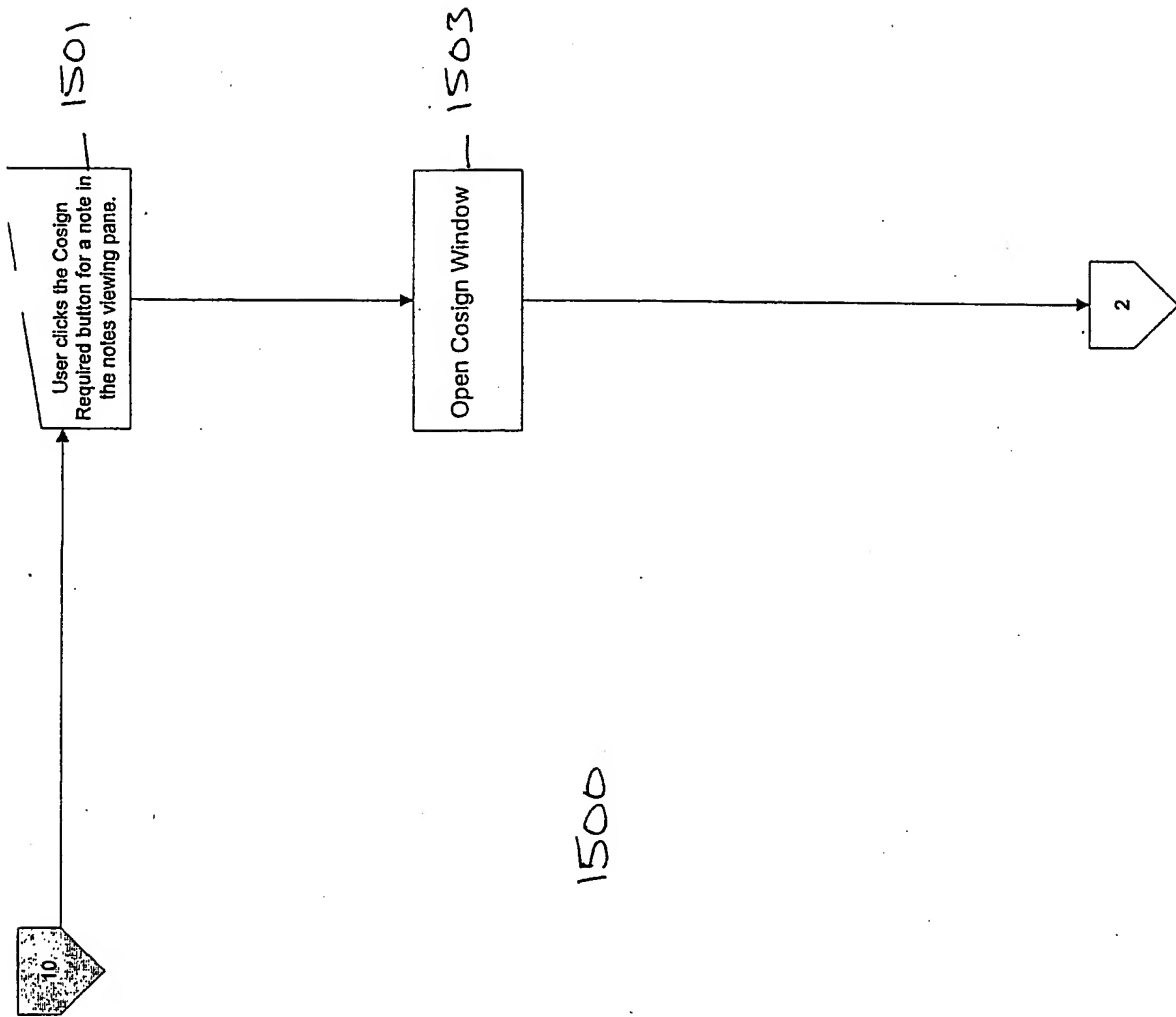


Figure 14



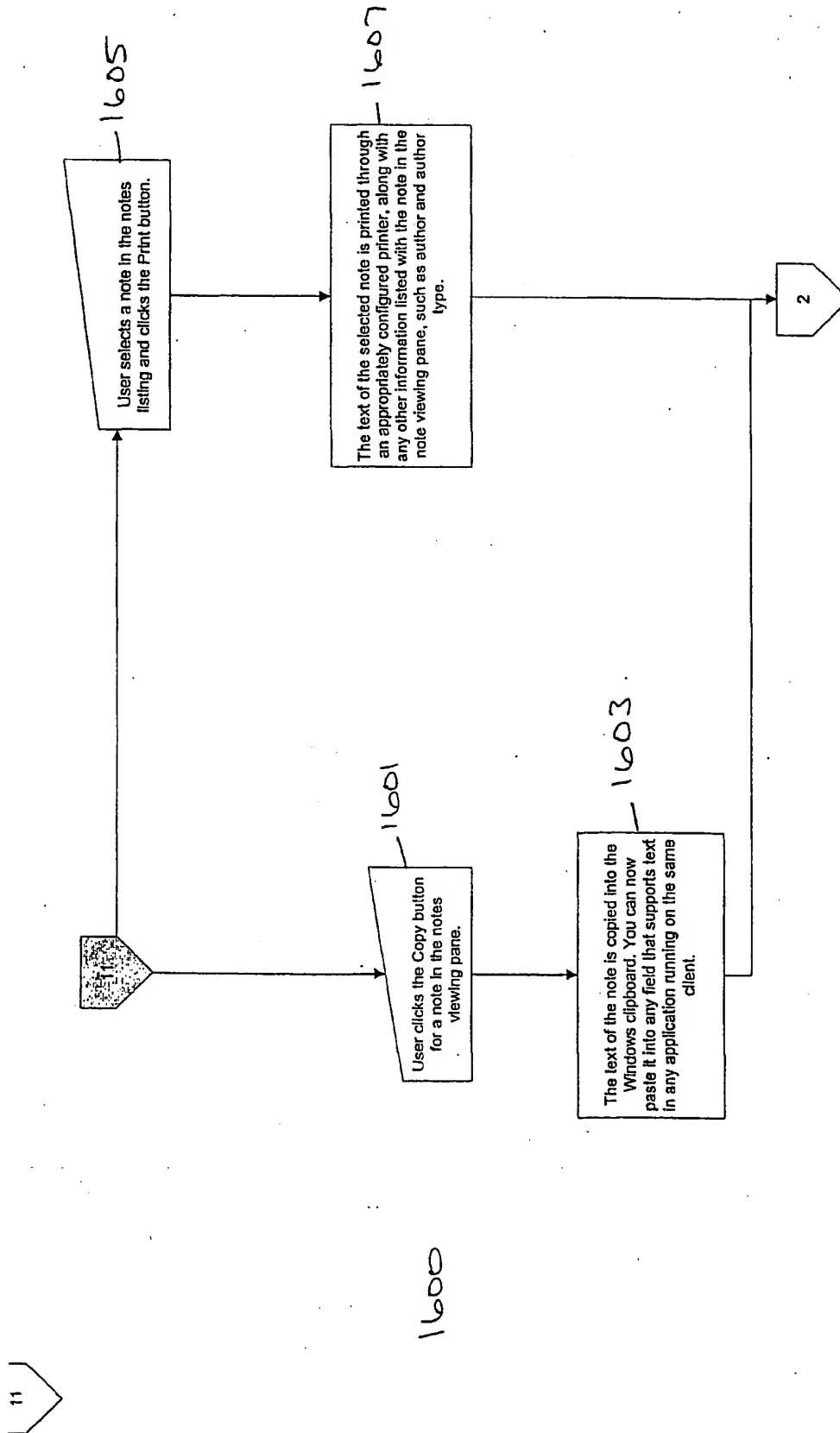


Figure 16